

*i.e.*, the closest distance between elements of adjacent stages is not much greater than the distance between electrodes within the same stage. Typically, the inter-stage distance  $d_2$  between collector electrode 112 and corona discharge electrode 113 of the adjacent stage should be between 1.2 and 2.0 times that of the intra-stage spacing distance  $d_1$  between corona discharge electrode 106 and collector electrode 112 (or spacing between corona discharge electrode 113, and collector electrode 111) within the same stage. Because of this consistent spacing, capacitance between electrodes 106 and 112 and between 106 and 113 are of the same order. Note that, in this arrangement, the capacitance coupling between corona discharge electrodes 106 and 113 may allow some parasitic current to flow between the electrodes. This parasitic current is of the same order of amplitude as a capacitive current between electrode pair 106 and 112. To decrease unnecessary current between electrodes 113 and 106, each should be supplied with synchronized high voltage waveforms. In the embodiment depicted in Figure 1A both EFA stages are powered by a common power supply 105 *i.e.*, a power supply having a single voltage conversion circuit or "converter" (*e.g.*, power transformer, rectifier, and filtering circuits, etc.) feeding both stages in parallel. This ensures that the voltage difference between electrodes 106 and 113 is maintained constant relative to electrodes 106 and 111 so that no or only a very small current flows between electrodes 106 and 113.

NBS/10/07 Please replace paragraph [0024] with the following amended paragraph:

NBS/10/07 [0024] Figure 1B shows an alternate configuration of an EFA 101 including a pair of EFA stages 116 and 117 powered by separate converters in the form of power supplies 102 and 103, respectively. First EFA stage 116 includes corona discharge electrode 107 and collecting electrode 108 forming a pair of complementary electrodes within stage 116. Second EFA stage 117 includes corona discharge electrode 109 and collecting electrode 110 forming a second pair of complementary electrodes. Both EFA stage 116, 117 and all electrodes 107-110 are shown schematically.

Please replace paragraph [0029] with the following amended paragraph:

[0029] Referring to Figure 3, a two stage EFA 300 includes a pair of converters in the form of HVPSs 301 and 302 associated with respective first and second stages 312 and 313. Both stages are substantially identical and are supplied with electrical power by identical HVPSs 301 and 302. HVPSs 301 and 302 include respective pulse width modulation (PWM) controllers 304 and 305, power transistors 306 and 307, high voltage inductors 308 and 309